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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/729,257	12/04/2003	Hidetoshi Yokota	23690-07983	1195

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EXAMINER
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MACILWINEN, JOHN MOORE JAIN

ART UNIT	PAPER NUMBER
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2142

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PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/729,257	<b>Applicant(s)</b> YOKOTA ET AL.	
	<b>Examiner</b> John M. MacIwinen	<b>Art Unit</b> 2142	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 24 March 2008.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-54 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-54 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>8/16/2008, 5/9/2007</u> .                                     | 6) <input type="checkbox"/> Other: _____                          |

Art Unit: 2142

## **DETAILED ACTION**

### ***Claim Rejections - 35 USC § 101***

1. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

2. Claims 25 – 50 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. Said claims recite a system with a software portion, a computer readable medium and systems with means for achieving various IPv6 tasks. Said claims are not clearly directed to statutory subject matter. For example, paragraph 43 of Applicant's specification states that

Furthermore, as will be apparent to one of ordinary skill in the relevant art, the modules, features, attributes, methodologies, nodes, servers, connect agents, and other aspects of the invention can be implemented as software, hardware, firmware, or any combination of the three. Of course, wherever a component of the present invention is implemented as software, the component can be implemented as a standalone program, as part of a larger program, as a plurality of separate programs . . .

Additional, examples of the claimed 'computer readable medium' are not present in Applicant's specification, and thus Applicant's claims relating to said 'medium' are not clearly directed to statutory subject matter.

### ***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having

Art Unit: 2142

ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1 - 4, 9 - 17, 19 - 20, and 22 - 50 are rejected under 35 U.S.C. 103(a) as being unpatentable over RFC 3053 (IPv6 Tunnel Broker), further in view of Waddington (Realizing the Transition to IPv6), further in view of Stevens (TCP/IP Illustrated, Volume 1: The Protocols).

5. Regarding claims 1, 25, 35 and 45, RFC 3053 shows a method, system, computer readable medium containing instructions, and system with means for an IPv6 enabled node to engage in IPv6 communication across a network containing IPv4 components, the method comprising (Abstract):

the IPv6 enabled node sending a query (pg. 3, Section 2),

the IPv6 enabled node determining an IPv6 connect agent to use to engage in IPv6 communication across the network containing IPv4 components (pgs. 3 - 4);

the IPv6 enabled node determining an address of that IPv6 connect agent; and

the IPv6 enabled node engaging in IPv6 communication across the network containing IPv4 components, using the determined address to communicate with that IPv6 connect agent (pgs. 3 - 4).

RFC 3053 does not explicitly show where the query is to a Domain Name System server and that responsive to sending the query, the IPv6 enabled node receiving at least one identifier of at least one IPv6 connect agent from the Domain Name System server.

Waddington shows querying a Domain Name System server, and responsive to sending the query, the IPv6 enabled node receiving at least one identifier of at least one IPv6 connect agent from the Domain Name System server (pg. 139, col. 2).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the disclosure of RFC 3053 with that of Waddington as both disclosures are directed to implementing IPv6.

Art Unit: 2142

RFC 3053 in view of Waddington do not explicitly show the where query identifies the IPv6 enabled node.

Stevens shows where a query to a Domain Name System server identifies the enabled node (pg. 10 and Fig. 14.3).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the disclosure of RFC 3053 in view of Waddington with that of Stevens in order to comply with traditional DNS querying methodologies and protocols.

6. Regarding claims 2, 26, 36 and 46, RFC 3053 in view of Waddington and Stevens further show wherein responsive to sending the query, the IPv6 enabled node further receives at least one associated attribute concerning at least one IPv6 connect agent from the Domain Name System server (Stevens, pg. 12).

7. Regarding claims 3, 27, 37 and 47, RFC 3053 in view of Waddington and Stevens further show where at least one received attribute comprises an address of an associated IPv6 connect agent (Stevens, pg. 12).

8. Regarding claims 4, 28, 38 and 48, RFC 3053 in view of Waddington and Stevens further show wherein Regarding claims 4, 29, 39 and 49, RFC 3053 in view of Waddington and Stevens further show wherein the IPv6 enabled node determining an address of that IPv6 connect agent comprises: gleaned the address from a received associated attribute concerning that IPv6 connect agent (Stevens, pg. 14, Figs. 14.10).

9. Regarding claims 9, 29, 39 and 49, RFC 3053 in view of Waddington and Stevens further show wherein the IPv6 enabled node determining an address of that IPv6 connect agent comprises: the IPv6 enabled node sending the received identifier of that IPv6 connect agent to the Domain Name System server; and responsive to sending the received identifier, the IPv6 enabled node receiving the address of that IPv6 connect agent from the

Art Unit: 2142

Domain Name System server (RFC 3053 pg. 3 Section 2 and Fig. 1, Waddington pg. 139, col. 2, Stevens, pgs. 10 – 12).

10. Regarding claim 10, RFC 3053 in view of Waddington and Stevens further show where the query sent by the IPv6 enabled node to the Domain Name System server comprises an Internet Protocol address (Stevens, pg. 17).

11. Regarding claim 11, RFC 3053 in view of Waddington and Stevens further show where the query sent by the IPv6 enabled node to the Domain Name System server comprises a Media Access Control address. (Stevens, pgs. 19 – 22)

12. Regarding claim 12, RFC 3053 in view of Waddington and Stevens further show the query sent by the IPv6 enabled node to the Domain Name System server comprises a character string (Stevens, pgs. 13 and 15).

13. Regarding claims 13, 30, 40 and 50, RFC 3053 in view of Waddington and Stevens further show a method for a Domain Name System server to provide to an IPv6 enabled node an address of an IPv6 connect agent, the method comprising: the Domain Name System server receiving a query from an IPv6 enabled node (Waddington, pg. 139), the query identifying the IPv6 enabled node (Stevens, pg. 10, Fig. 14.3); responsive to the Domain Name System server receiving the query, the Domain Name System server determining at least one identifier of at least one IPv6 connect agent; and the Domain Name System server sending to the IPv6 enabled node at least one identifier of at least one IPv6 connect agent (RFC 3053, pg 3).

14. Regarding claim 14, RFC 3053 in view of Waddington and Stevens further show wherein the Domain Name System server determining at least one identifier of at least one IPv6 connect agent comprises: using the entire received query as a key to find a record in a lookup table (Stevens, pg. 20).

Art Unit: 2142

15. Regarding claim 15, RFC 3053 in view of Waddington and Stevens further show wherein the Domain Name System server determining at least one identifier of at least one IPv6 connect agent comprises: using a portion of the received query to find a record in a lookup table (Stevens, pg. 20).

16. Regarding claims 16, 31, 41 and 51, RFC 3053 in view of Waddington and Stevens further show the Domain Name System server sending to the IPv6 enabled node an associated attribute concerning at least one IPv6 connect agent (Stevens, pg. 12 and RFC 2043, pg. 3).

17. Regarding claims 17, 32, 42 and 52, RFC 3053 in view of Waddington and Stevens further show where at least one attribute comprises an address of an associated IPv6 connect agent (Stevens, pg. 12 and RFC 3053 pg. 3).

18. Regarding claims 19, 33, 43 and 53, RFC 3053 in view of Waddington and Stevens further show the Domain Name System server sending to the IPv6 enabled node at least one name of at least one IPv6 connect agent; and the Domain Name System server receiving a name of a desired IPv6 connect agent from an IPv6 enabled node (RFC 3043, pg. 3, Stevens pgs.11, 13 and 15).

19. Regarding claims 20, 34, 44 and 54, RFC 3053 in view of Waddington and Stevens further show wherein the Domain Name System server determining at least one identifier of at least one IPv6 connect agent comprises: using the received name of the desired IPv6 connect agent to find a record in a lookup table; and gleaning from the found record an identifier of an IPv6 connect agent to send to the IPv6 enabled node (Stevens, pg. 20).

20. Regarding claim 22, RFC 3053 in view of Waddington and Stevens further show wherein the query received by the Domain Name System server comprises an Internet Protocol address (Stevens, pgs. 11 and 13).

Art Unit: 2142

21. Regarding claim 23, RFC 3053 in view of Waddington and Stevens further show wherein the query received by the Domain Name System server comprises a Media Access Control address (Stevens, pgs. 19 - 22).

22. Regarding claim 24, RFC 3053 in view of Waddington and Stevens further show wherein the query received by the Domain Name System server comprises a character string (Stevens, pgs. 13 and 15)

23. Claims 5, 6 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over RFC 3053 in view of Waddington and Stevens as applied to claim 1 above, and further in view of Leighton et al. (US 6,553,413 B1), hereafter Leighton.

24. Regarding claim 5, RFC 3053 in view of Waddington and Stevens show claim 1.

RFC 3053 in view of Waddington and Stevens do not show at least one received attribute comprises information concerning a physical location of an associated IPv6 connect agent.

Leighton shows at least one received attribute comprises information concerning a physical location of an associated IPv6 connect agent (col. 9 line 65 – col. 10 line 12).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the disclosure of RFC 3053 in view of Waddington and Stevens with that of Leighton in order to enable selecting the physically closest server.

25. Regarding claim 6, Regarding claim 5, RFC 3053 in view of Waddington, Stevens and Leighton show wherein the IPv6 enabled node determining an IPv6 connect agent to use to engage in IPv6 communication across the network containing IPv4 components comprises: the IPv6 enabled node choosing the IPv6 connect agent that is physically closest to the IPv6 enabled node (RFC 3053, pg. 3, Section 2).

26. Regarding claim 18, RFC 3053 in view of Waddington, Stevens and Leighton further show where at least one associated attribute comprises information concerning a physical



Art Unit: 2142

location of an associated IPv6 connect agent (Stevens, pg. 14 and Leighton, col. 9 line 65 – col. 10 line 12).

27. Claims 7 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over RFC 3053 in view of Waddington and Stevens as applied to claim 1 above, and further in view of Coughlin et al. (US 6,810,411 B1), hereafter Coughlin.

28. Regarding claim 7, RFC 3053 in view of Waddington and Stevens show claim 1.

RFC 3053 in view of Waddington and Stevens do not show where the IPv6 enabled node determining an IPv6 connect agent to use to engage in IPv6 communication across the network containing IPv4 components comprises: responsive to the IPv6 enabled node having received exactly one identifier of exactly one IPv6 connect agent from the Domain Name System server, the IPv6 enabled node choosing that one IPv6 connect agent.

Coughlin shows the IPv6 enabled node determining an IPv6 connect agent to use to engage in IPv6 communication across the network containing IPv4 components comprises: responsive to the IPv6 enabled node having received exactly one identifier of exactly one IPv6 connect agent from the Domain Name System server, the IPv6 enabled node choosing that one IPv6 connect agent (col. 10 lines 45 – 67).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the disclosure of RFC 3053 in view of Waddington and Stevens with that of Coughlin in order to ensure a DNS server was selected, and when possible, the fastest available server is selected.

29. Regarding claim 8, RFC 3053 in view of Waddington, Stevens and Coughlin show wherein the IPv6 enabled node determining an IPv6 connect agent to use to engage in IPv6 communication across the network containing IPv4 components comprises: the IPv6 enabled node choosing the IPv6 connect agent whose identifier the IPv6 enabled node received first (Coughlin, col. 10 lines 45 – 67).

Art Unit: 2142

30. Claim 21 is rejected under 35 U.S.C. 103(a) as being unpatentable over RFC 3053 in view of Waddington and Stevens as applied to claim 13 above, and further in view of Kang et al. (US 2003/0074461 A1).

Regarding claim 21, RFC 3053 in view of Waddington, Stevens show claim 13.

RFC 3053 in view of Waddington, Stevens do not explicitly show using a Naming Authority Pointer Domain Name System resource record.

Kang shows using a Naming Authority Pointer Domain Name System resource record ([8, 22, 31 – 34]).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the disclosure of RFC 3053 in view of Waddington and Stevens with that of Kang in order to use an additional record, compatible with the DNS methodology of the other disclosures, to resolve and lookup hosts (Kang, [8]).

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to John M. MacIlwain whose telephone number is (571) 272-9686. The examiner can normally be reached on M-F 7:30AM - 5:00PM EST; off alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Andrew Caldwell can be reached on (571) 272-3868. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2142

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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